

WHAT IS CLAIMED IS:

1. A method for producing a composite metal product containing a carbon nano material and a low melting point metal material, comprising the steps of:

preparing a molten low melting point metal material;

cooling the molten low melting point metal material to a thixotropic semi-molten state in which liquid phases and solid phases coexist;

forming a composite material by kneading the carbon nano material and the low melting point metal material in the thixotropic state;

injecting the composite material into a mold in the thixotropic state by a molding machine having heating means;

and

obtaining the composite metal product.

2. The method according to claim 1, wherein the composite material to be supplied to the molding machine comprises the low melting point metal material in a semi-molten state and the carbon nano material.

3. The method according to claim 1, wherein the composite material to be supplied to the metal molding machine comprises a solid state material selected from the group consisting of granules such as pellets or chips, ingots and short columns and the low melting point metal contained in said composite material to be injected, is made to a semi-molten state by the metal molding machine having a heating means.

4. A method for producing a composite metal product containing a carbon nano material and a low melting point metal material, comprising the steps of:

preparing a molten low melting metal material;

cooling the molten low melting point metal material to a thixotropic semi-molten state in which liquid phases and solid phases coexist;

5 forming a composite material by kneading the carbon nano material and the low melting point metal material in the thixotropic state;

10 injecting the composite material into a mold wherein the low melting point metal contained is in a completely molten state by a metal molding machine having a heating means; and obtaining the composite metal product.

15 5. The method according to claim 4, wherein the composite material to be supplied to the metal molding machine comprises the low melting point metal material in a semi-molten state and the carbon nano material and said low melting point metal contained in said composite material to be injected is made to a completely molten state by the metal molding machine having a heating means.

20 6. The method according to claim 4, wherein the composite material to be supplied to the metal molding machine comprises a solid state material selected from the group consisting of granules such as pellets or chips, ingots and short columns, and the low melting point metal material contained in said 25 composite material to be injected, is made to a completely molten state by the metal molding machine.

30 7. A composite metal product of a carbon nano material and a low melting point metal material, wherein the composite metal product comprises a metal product molded by any one of the molding methods according to claims 1 to 6.